

# Gas Fired Portable Unvented Infrared Heater

## Abstract

A portable heater adapted for use in a recreational enclosure or temporary work enclosure includes a housing having an air inlet on the lower front face. A gas supply is partially enclosed by the housing which provides propane to the mouth of a burner venturi located within the housing. Air is drawn through the air inlet and also enters the mouth of the burner venturi. The air and gas are mixed thoroughly as they travel upwardly through the burner venturi. A chimney effect increases fresh air flow velocity into the burner venturi and allows the heater to operate at a reduced fuel gas pressure. Upon exiting the burner venturi, the air/gas mixture is to a plenum and radiant surface where combustion takes place. Any conventional means may be provided to ignite the air/gas mixture in order to cause combustion. The combustion products deflect off a deflector, which is cooled on a rear face by air flow through the housing, which decreases the temperature of the combustion products before exiting an outlet. An oxygen depletion system (ODS) shuts off the portable heater when oxygen lev-

els begin to drop and consequently carbon monoxide levels begin to rise.